



Communicator

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and Much More!

The call for Amateur Radio operators may come at any time—Are you ready?
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The Communicator



**SURREY
AMATEUR RADIO CLUB**

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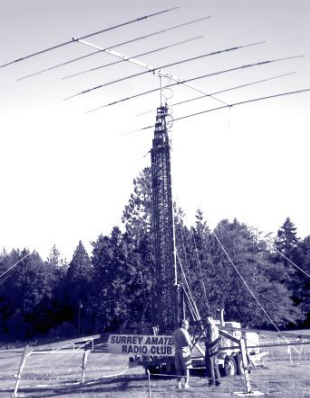
WEBMASTER
Hiu Yee VE7YXG

QSL Manager
Nelson Eisel VE7NAE

VIA THE WEB
www.ve7sar.net

The SARC Communicator is published monthly for members of the Surrey Amateur Radio Club.

SARC maintains a website at www.ve7sar.net that includes club history, meetings, news and other information.



February Monthly Meeting Minutes

February 12, 2014

Introduction/Announcements

John VA7XB opened the meeting at 1900 hr. A welcome was extended to guests Alex Danese IZ7FMM and his wife Simona from Italy, and new members Alan Peterson VA7ALZ and Jeremy Morse. John confirmed that the post-meeting social get-together would continue at McDonalds 156th St and Fraser Highway. After discussion of a suitable date, it was decided that the CPR course would take place Sunday afternoon March 9th, subject to availability of the venue and instructors. The March SARC meeting will feature guest speaker Mike Andrews on "Lessons Learned [from Other Disasters]".

Financial

Scott VE7HA reviewed the status of SARC's chequing and savings accounts, and noted a healthy balance in both. Scott advised that,

with the assistance of Hiu VE7YXG, PayPal has been made available on SARC's website for payment of dues and donations and ordering name badges. The cost of all items has been increased by \$1 to cover PayPal fees. Members are requested to test it and report any problems.

Membership

Bill VA7ZBL reported that, including two new members, the club roster now stands at 75. Bill also asked about interest in "Raspberry Pi" and, with several members expressing interest, John VA7XB will circulate an email invitation to a meeting for users. Jay VE7KC described this device as a \$35 mini computer with no built-in keyboard or screen but with an HDMI and USB connection running on Linux with lots of apps.

Website

Hiu VE7YXG noted that the PayPal buttons can be found on the SARC

CLUB EXECUTIVE 2013-2014

PRESIDENT

John Brodie VA7XB

VICE PRESIDENT

Brett Garrett VE7GM

SECRETARY

Rob Gilchrist VE7CZV
(also Net Manager)

TREASURER

Scott Hawrelak VE7HA

DIRECTORS

John Schouten VE7TI
(Communicator Editor)

George Merchant
VE7QH (Repeaters)

Bill Little VA7ZBL
(Membership)

Bill Gipps VE7XS

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Ken Clarke VE7BC

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RAC News
March SARC Calendar

	SEPARS Net	SARC Net
1 st Tuesday	Drew VA7DRW Jay VE7OFH Standby	Brett Garrett VE7GM
2 nd Tuesday	Dixie VA7DIX Alan VA7BIT Standby	Jinty VA7JMR
3 rd Tuesday	Rob VE7CZV	Anton VE7SSD
4 th Tuesday	Peter VE7PGX Dixie VA7DIX Standby	John VA7XB
5 th Tuesday	Jinty VA7JMR	Elizabeth VE7ELA
Want a turn at Net Control? Contact the SARC Net Manager VE7CZV @ separs.net		

SARC hosts an Amateur Radio net each Tuesday evening at 8 PM. Please tune in to the VE7RSC repeater at 147.360 MHz (+600 KHz) Tone=110.9, also accessible on IRLP node 1736 and Echolink node 496228. On UHF we operate a repeater on 443.775MHz (+5Mhz) Tone=110.9 and EchoLink Node 1737

website home page and members should report any issues.

Repeater

In the absence of George VE7QH, John VA7XB reported that Dave Cameron VE7LTD has restored full voice mail and signal test features to the repeater, and that the repeaters, including IRLP and Echolink, appear to be working well.

Equipment

Rick VE7GMO reported that he will complete repairs to the big trailer wiring once the weather warms up.

Operator Training

Brett VE7GM indicated that the next scheduled contest opportunity is the CQ WW WPX Contest (SSB) on March 29-30. SARC's participation in the previously scheduled Feb 22-23 North American QSO Party (RTTY) has been cancelled. Nevertheless, members were advised that operators may be invited to participate in the March 1-2 ARRL International DX Contest (SSB) and the Mar 15-17 BARTG HF (RTTY) Contests, although these contests are not actually on the operator training schedule.

Field Day Planning

Brett VE7GM announced that some significant changes are under consideration for FD including:

- GOTA station only if activity can be guaranteed;
- The competitive station to operate as 2A and using members' own equipment;
- Use of more than one radio per band if technical issues can be resolved;
- One position in the operating tent for non-competing operators, possibly sharing the band with GOTA.

A show of hands was taken for various options involving operators with no or limited HF experience, one option being to

have an educational session in another tent, and then each participant to have a practice opportunity at the non-competing station; this question brought forth a good response.

Brett emphasized that volunteers are now sought for the following task assignments, and those which cannot be filled will likely be dropped:

Needed Now:

- GOTA Station Manager
- Bonus Points Manager
- HF Radio Station for non-competitive operators

Needed Soon:

- Internet & Networking
- Food Manager
- Educational Activity Leader
- Free VHF Station
- Media Publicity
- Public Information Table
- Youth Participation

New Business

There being no new business, a coffee break was taken and followed by the featured presentation.

Presentation

Over the next 75 minutes, a fast-paced presentation titled "Getting Started in HF" was made by Stan VA7NF, Brett VE7GM, Jay VE7KC, Al VE7CDC and John VA7XB. Thanks were expressed to these members for their well-prepared material. The PowerPoint presentation is to be available on SARC's website shortly. *(It is now available at URL: <http://goo.gl/l69Zkd> -Ed)*

The 50/50 was won by Al Peterson.

The meeting was adjourned at 2105

DOWN THE LOG...

SARC Monthly Meetings

2nd Wednesday (Sept-Jun)
1900 hrs local at the Emergency Management BC PREOC,
14275 96th Avenue, Surrey, BC

Weekly Club Breakfast

Friday at 0800 local
Kalmar Family Restaurant at
King George Blvd. & 81st Avenue
Surrey

SARC Net

Tuesday at 2000 hrs local
on 147.360 MHz (+) Tone=110.9

SEPARS Net

Tuesday at 19:30 hrs local
on 147.360 MHz (+) Tone=110.9

Announcements & News

SEPARS Monthly Workshop
Third Thursday, 1900-2130 local
14923-64th Ave, next to Firehall
#9, Surrey.

SEPARS Training

Fourth Saturday, 0830 local,
Firehall #1, 88 & 132nd Street,
Surrey

On the Web ve7sar.net

Between newsletters, watch your e-mail for announcements of events, monthly meetings and training opportunities. These announcements can also be found on our web page, or via:

Twitter
[@ve7sar](https://twitter.com/ve7sar)

Photos
Web Albums

Next Meeting...

Lessons Learned



March 12th Meeting—Lessons Learned

On Wednesday, March 12, our guest speaker will be Mike Andrews (VE7MPA), the Emergency Planning Officer for the North Shore Emergency Management Office (NSEMO) and an Instructor with the Justice Institute of BC (JIBC).

Mike will be delivering a session entitled “Hard Lessons in Emergency Management” which reflects on his experiences in his 8 years as a Regional Manager for Emergency Management BC/PEP. In this capacity, Mike chaired the Provincial Emergency Radio Advisory Committee (PERAC) and in this relaxed and informal session he will discuss case studies as the Director or Planning Chief in each of the province’s 6 Provincial Regional Emergency Operations Centres (PREOCs) and in the Provincial Emergency Coordination Centre (PECC) in Victoria.



Alberta Tornadoes.



Ice Storms



Calgary Floods.



2003 Okanagan wildfires EOC: Vancouver Amateurs receive a certificate for their service.

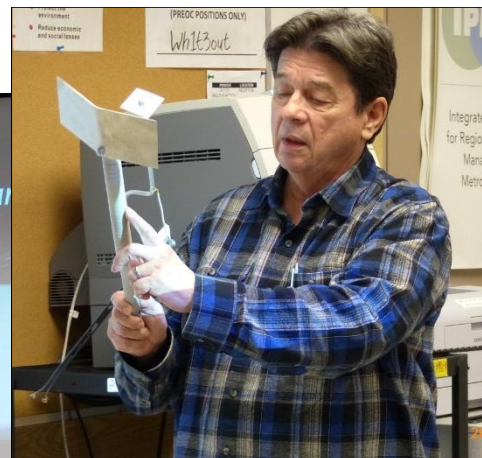
You never know when the call may come. In the summer of 2003, during the height of the Okanagan wildfires, local Amateurs got that call from the Provincial Emergency Program. The Kelowna Emergency Operations Centre hams required relief after long shifts in the radio room. They were there for 10 days providing emergency traffic and welfare messaging. It could easily happen again... Are you ready?

...Last Meeting

Getting Started In HF

Feb. 12th Meeting—An HF Primer

At SARC's Feb. 12th meeting, about 30 members and guests enjoyed a 75 minute fast-paced presentation titled "Getting Started in HF" given by experienced HFers: Stan VA7NF, Brett VE7GM, Jay VE7KC, Al VE7CDC and John VA7XB. Topics covered the gamut from "why HF?" to basic equipment and its characteristics, cabling and connectors and concluding with a review of shortened, ad hoc and "junk" antenna options for the real-estate challenged members. The presentation was made in response to the request of a few heretofore strictly VHF/UHF members who have expressed a wish to experience the challenges and fun of HF, but needed a helpful nudge in the right direction.





The Contest Contender

Jim Smith VE7FO

On Contest Training

I'm chasing the W1AW anniversary stations and have maybe 60% of the available band/mode slots in the log. On Friday I contacted W1AW/4 on SSB, I've forgotten which band.

When I called the op said, "Hi Jim". Well, this happens surprisingly often when I call a W1AW station but in this case he went on to say, "This is Dan, K1TO. You guys are doing really good work there. It's all very well for us to all get on in contests and have fun but if we don't bring in new blood then contesting will die."

If you don't recognize the call K1TO check out <http://www.wrtc.info/> and look down the left hand Winners column.

I have to say that I experienced an extreme warm glow at having our efforts recognized by one of the proven best contest ops in the world. Three in a row WRTC wins! That's the ham radio equivalent of an Olympic gold medal in each of three successive competitions.

It still gives me goose bumps when I think about it.

In case you aren't aware, our very own Mike VE7ACN & RW0CN, was a WRTC competitor in 1990. That's like being named to represent your country in the Olympics! The qualifying competition is equally arduous.

While I may have the most recognized call of those involved in the contest op training, I couldn't have accomplished this by my self. It's only because of the whole-hearted support I've received, right from my initial contest op training proposal to the present day, from the rest of you in your leadership roles in the Surrey ARC that we're having the success and recognition which we are.

Thank you so much for helping me to fulfill my declining years' Mission Statement which is, "Make more testers". This is a very emotional moment for me.

73, Jim VE7FO

Still Puzzled About HF Propagation?

Richard VE2XIP has an informative blog on a variety of Amateur Radio subjects. Among the areas he covers is a very good primer on HF Propagation. I know this subject can be a difficult one to grasp, especially for beginners—even the more experienced have challenges in this area.

Richard writes: "The very first thing I noticed when I got interested in propagation was a vast number of websites displaying charts and grids related to HF propagation conditions, but I didn't really understand them at first. There are more types of measurements about the Sun's activities than most care to understand, but there are a few ones that are very important to learn if you want to be able to understand a propagation reports."

Have a look at the website. It's at URL:
<http://ve2xip.cactus.net/?p=1676>

Calculated Conditions		
Band	Day	Night
80m-40m:	Fair	Good
30m-20m:	Good	Good
17m-15m:	Good	Good
12m-10m:	Fair	Poor

Click above for space weather details



More Ham News

War on the Short Waves

This 1941 book by **Harold N. Graves, Jr.** is now available for free download in electronic format: War on the Short Waves

Contents

- I. Round the World on the Air Waves
- II. The Story of International Broadcasting
- III. Weapons in the Radio Armory
- IV. The Tragedy of Paris-Mondial
- V. The Nazis Tell the World
- VI. The Axis Junior Partner
- VII. The Soviet Enigma
- VIII. The BBC Takes up the Cudgels
- IX. What Is the Radio Weapon Worth?

Direct link to PDF file

<https://archive.org/download/WarOnTheShortWave/WarOnTheShortWave.pdf>

EPUB and Kindle formats at

<https://archive.org/details/WarOnTheShortWave>

RAC Winter Contest

There is a video showing operations at the VE6JY contest station during the recent RAC Winter Contest using the call VE6RAC.

It's a great idea... perhaps we can reciprocate next year.



Resistor ID Made Easy

Need a quick and easy way to sort through a few hundred random resistors? You could do them one at a time by reading the color codes yourself... or you could get a machine to do it for you!

When [Robert] was faced with a pile of unsorted resistors he quickly decided he did not have the patience to sort them manually. So, he started by writing an Android app using OpenCV to detect and identify resistor color codes. The problem is, most phones have trouble focusing at short distances – and since resistors are so small, holding the phone farther back results in color rings only being a few pixels wide – not the greatest for image recognition!

So, he started again on his computer, using a cheap LED-lit webcam instead. He wrote the app in java so he could re-use parts of the code from the Android app. It seems to work pretty well – check it out in the following video!





SEPAR Report

Fred Orsetti VE7IO

Another Successful Exercise



Regular training exercises are being held on the fourth Saturday of each month and the February training was done at the EOC (fire hall #1) using the radio room facilities and the mobile trailer.

SEPAR conducted an emergency exercise on Saturday, February 22, 2014 to provide communications for the mock scenario of a major chemical spill in the Cloverdale area. The Radio Room at Fire Hall #1 and the Communications Trailer were activated at 09:30 with Marcy VE7JT acting as Station Manager for the trailer, Peter VE7PGX as Station Manager for the radio room and Rob VE7CZV performing the role of Net Control.

Communications were established and a series of mock emergency and priority NTS messages were passed between the two stations. All messages were passed accurately in a timely manner and the operators prioritized emergency messages correctly. All operators followed the proper protocols and all functions were handled as expected. The exercise concluded at 10:45, all stations stood down, and a "hot-wash," or debriefing session was conducted.

Congratulations to Dixie VA7DIX, Pamela VE7PFH, Don VA7GL, Jinty VA7JMR, Bob VE7FWZ, Ron VE7VTA, Stan VA7NF, Rick VE7GMO, Garvin VA7YEE, Rob VE7CZV, and Marcy VE7JT.

The success of this exercise is a testament to the operators' diligence and commitment and I am confident that SEPARS will perform their communications functions competently and professionally in an emergency or disaster.

~ Peter Gauld VE7PGX (RAC CEC)
Emergency Exercise Coordinator



This is VE7HME with traffic



This is VE7MOV go ahead with your traffic

SEPAR Meetings

Third Thursday of each month starting at 1900 hrs

Fourth Saturday of each month starting at 0900 hrs

Location and event schedule can be found at
separ.shutterfly.com — click on the calendar tab

Doors Open Event

Plans are now underway for SEPAR to participate in the Doors Open event with the City in June.

We will offer workshop at 1015, 1100, 1145 (lunch 1230 - 1300), 1315, 1400, 1445, and 1530. The workshop should run 10 to 20 minutes dependent on the participants' ability to read the cue cards. This will allow approximately 20 minutes between sessions to recruit from the public viewing the SEPAR trailer in order to fill any sessions not at the maximum pre registered numbers. Full registration per session will be 20 participants X 7 sessions = 140 participants.

We will need a minimum 7 SEPAR volunteers for the day. 6 ops for HT (2 distress ops with 5 participants each, 2 response ops with 5 participants each, one station manager, one photographer) 1 op for SEPAR trailer. SEPAR needs your support!

Will use our ICOM UHF radios donated by ICOM, SEPAR operator HT's and possibly a Grab N Go kit for 'A Bad Storm'

This event will provide extremely good exposure for SEPAR and our ability to provide emergency communications.

SEPAR User Group Site

The Google site is now being updated regularly with information on SEPAR activities so please sign onto the SEPAR group if you are not already a participant.

Don't forget the SEPAR annual general meeting (AGM) is coming up in April.

~ Fred VE7IO
SEPAR Director



The SEPAR February exercise/ Communications were established and a series of mock emergency and priority NTS messages were passed between the two stations.

Maple Ridge Amateur Radio Club Swap Meet

The Maple Ridge Amateur Radio Club proudly presents

The Fraser Valley's Largest Ham Radio, Computer and Electronics Swapmeet

Sunday, 04 May 2014

9AM - 1PM

Admission only \$5!

Location and further details to follow

Expecting QSL Cards?

Are you expecting QSL cards via the in-coming bureau? If so, and you are a regular attendee at the Friday morning SARC breakfast you can pick them up there.

Alternatively if you may arrange to collect them at SARC monthly meetings. All you have to do is advise QSL Bureau Manager, Ken Clarke VE7BC, that one or the other is your choice of pickup location. Ken can be reached at: kenjclarke@shaw.ca or ve7bc@gmail.com



Radio-Active

Jinty Reid VA7JMR

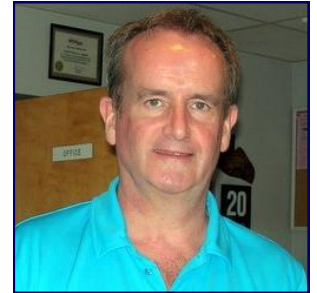
Introducing Ken Clarke VE7BC

Ken is a B.C. boy who was born in Burnaby in 1958. He was one of two children, his sister, Debbie, now being deceased. For most of his life Ken has lived in Surrey. He attended the Princess Margaret High School where, in his final year of Grade 12, he had an electronics teacher who instilled in him an interest in radio. While in his class, Ken built a radio and started taking his Basic Ham Radio License. He joined SARC as one of its earliest members and completed his Basic license in 1983 and in 1984 he obtained his Advanced License. Ken enjoyed playing hockey in high school and also played in the Surrey Minor Hockey league. He now likes to fish and play golf.

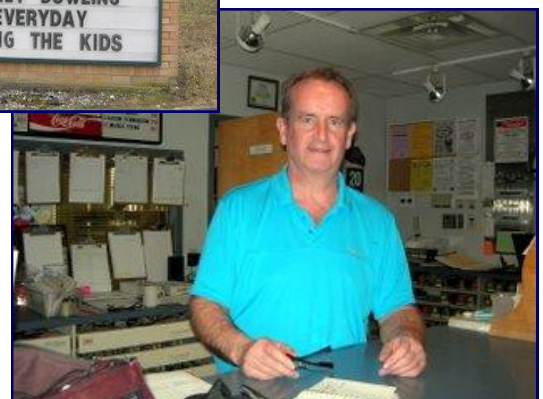
When Ken was 15 year of age he began bowling at the Scottsdale Bowling Lanes, eventually going to work there in 1984. This eventually led to him becoming the manager and in 1992 he bought shares in the ownership of the company. In addition to being a part owner Ken acts as general manager and works on the front desk doing whatever needs to be done.

In the area of Ham radio, Ken has an ICOM 756 Pro, ICOM 2820, ICOM 706 MK II and has a radio shack in his home as well as having a radio station in his holiday cabin at Timothy Lake in the Cariboo, near 100 Mile House. Ken is the Manager of the VE7/VA7 Incoming QSL Bureau for B.C. He enjoys contesting and DX, attending Dayton Hamvention in Ohio with Fred Orsetti, with whom he has been a long time friend. Ken is also in charge of Public Service Special Events such as the Rotary Bikeathon, Hyack Parades etc.

Travelling is something Ken has enjoyed and he has been to Mexico, Jamaica, Hawaii, New Zealand and the Dominican Republic. What does he plan to do when he retires? Well, be more involved than he is already in ham radio of course! Reluctant to blow his own trumpet, Ken was comfortable with the writer contacting Fred. Fred was happy to say that he saw Ken as a hard worker and someone who is very insightful, sensitive to other people's needs and someone who has a great love for ham radio. So if you are ever bowling at the Scottsdale Bowling Lanes, don't forget to say 'Hi' as that is where Ken has his "second home".



Ken with the Incoming QSL Bureau cards



The SARC Calendar ...places to be in Surrey for Amateur Radio in the month ahead

March 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
23 	24	25	26	27	28	1 CONTEST: ARRL International Contest (SSB)
		For details on all SARC events, go to ve7sar.net For details on all SEPARS events, go to separ.shutterfly.com/calendar				
2 CONTEST: ARRL International Contest (SSB)	3	4 SEPAR NET 7:30 SARC NET 8:00	5	6	7 Weekly SARC Breakfast 8:00 Kalmar Family Restaurant 81 st & King George Blvd.	8 CONTEST: NA Sprint (RTTY) - Starts 0000Z Mar 9
9 CPR Course 1-5pm	10	11 SEPAR NET 7:30 SARC NET 8:00	12 SARC General Meeting 7:00 PREOC	13	14 Weekly SARC Breakfast 8:00	15 CONTEST: BARTG HF (RTTY)
16 CONTEST: BARTG HF (RTTY)	17	18 SEPAR NET 7:30 SARC NET 8:00	19	20	21 Weekly SARC Breakfast 8:00	22
23	24	25 SEPAR NET 7:30 SARC NET 8:00	26 SARC Exec Meeting	27	28 Weekly SARC Breakfast 8:00	29 CONTEST: CQ WW WPX (SSB)
30 CONTEST: CQ WW WPX (SSB)	1	2	3	4	5	6
	Contest Details: http://hornucopia.com/contestcal/contestcal.html					



QRM

...from the Editor's shack

Do you have a photo or bit of club news to share?

An Interesting link?

Something to sell or something you are looking for?

Email it to SARCcommunicator@outlook.com for inclusion in this column.

Welcome

In South Africa, the government is planning to pass regulation to force all VHF repeaters in the 136 MHz - 174MHz band to operate with 12.5 KHz channel spacing, including amateur repeaters. In Canada, commercial users have already complied with 12.5 KHz channel spacing which reduces deviation somewhat but also ensures that receivers are narrower. If Amateur repeaters here were to go to 12.5 KHz spacing (from our current 20 KHz.), it would mean that we could accommodate far more 2-metre repeaters in our band. However, it would also mean that we would have to buy new 2-metre radios, ones with narrower receivers to prevent adjacent channel interference. Here's the story from South Africa:

http://www.southgatearc.org/news/2014/february/amateur_radio_repeater_must_comply_with_12_5%20khz_channel_spacing.htm

Congratulations Mikel!

We have received word that Mike Zavarukhin VE7ACN/RWOCN has been approved for permanent resident status. Mike wrote:

"It was really great support to me as a newcomer to get adopted to the new life and have the possibility to keep my feet wet. Sharing experience is another wonderful side of our hobby.

Fresh news - we are approved to be Permanent Residents of Canada and will have the magic visas as soon as we have our passports back, in the next few weeks!

Another exiting event for me is I became a homeowner of a wonderful 280 sf home on a quiet 10,000 sf corner lot at thecGovernment Road area in Burnaby. The City is noisy for sure, but with simple wire antennas I can do some contesting and DXing. Not as much fun as being a big gun, but still better than nothing! ARRL CW ended with 503 QSOs and 228 mults barefoot."

Congratulations Mike on acquiring permanent resident status and becoming a homeowner we are very happy for you and your family. You have graciously shared your experiences with us and are a great asset to our club.



Soaking up some Palm Springs sunshine, Club President John Brodie VA7XB and John Schouten VE7TI

Basic Amateur Radio Course

The Delta Amateur Radio Society's Basic Amateur Radio Course will be starting on Tuesday, April 1. Course fee is \$65 with an early bird special of \$50 till March 23, 2014. All details about the course and how to register can be found at: <http://deltaamateurradio.com/>

A New Parts & Equipment Dealer

Thanks to Kevin McQuiggin VE7ZD for the following tip. There's a new parts and electronic equipment clearance house in the Okanagan.

<http://www.sphere.bc.ca/test/hot.html> has a load of small components, motors, test equipment, service manuals, books... even sliderules—what are those? Think of them as wireless manual calculators. In any event too much good stuff to list here.

[Sphere Research Corporation](http://www.sphere.bc.ca)

3394 Sunnyside Rd.

West Kelowna, BC, Canada V1Z 2V4

Phone: +1 (250) 769-1834



Page 13—News You Can Lose

The Lighter Side of Amateur Radio

Use Your iPhone To Send Smoke Signals Even When There Is No Service

If you're tired of iMessage failures, spotty coverage from your carrier, and sickeningly cute emoticons, here's a [clever iPhone case](#) that will revolutionize how you chat with your friends—using technology that's been around for hundreds of years.

Dennis Be Bel's S.M.S.— or smoke messaging service — case heats and vaporizes lamp oil every time a simple button is pressed, sending a small puff of smoke wafting up into the air. And if conditions are right, the person you're trying to message will see that puff, or several, and then respond in a similar fashion. Click on the photo for a video demonstration.


It's completely secure because it's up to you and the person you're communicating with to come up with a way to translate the smoke puffs into messages. You can simply go with old school Morse code—which admittedly is less secure—or create an entire new language. from scratch. And besides the cost of lamp oil, and the case itself, it's completely free to use in perpetuity—without a contract.



Secret Morse Code Messages Cheer Up Prisoners

Blair VE7HHH reports in the NSARC Newsletter on an interesting program on CBC Radio One last Saturday morning in the "Under the Influence" series, hosted by Terry O'Reilly.

The program included one segment on the use by the Columbian military of Morse Code to send a morale-boosting message to its captured prisoners being held in the jungles by guerrilla forces... without the jailers being aware of the transmission. In fact, the entire 30 minute program illustrated the imaginative, if unconventional use of radio to get its message across... whatever that message was.



Communications Academy

- 2014 -

A Training Workshop for Volunteer
Emergency Communicators
March 22—23, 2014
South Seattle Community College
0830—1700 each day

The Communications Academy is open to anyone
with an interest in emergency communications,
volunteer or professional.

The presentations are designed to promote the
development of knowledgeable, skilled emergency
communicators who will support their local communities
during a disaster or emergency response

Register online after February 1st at
<http://www.CommAcademy.org>

Keynote Presentations □ 40 hours of classes & workshops
Exhibitors & Vendors □ Communication Van Displays □ Door Prizes

Anyone For A Little Pi?

A Low-cost, Amazing Little Computer



The Raspberry Pi is a credit-card-sized single-board computer developed in the UK by the Raspberry Pi Foundation with the intention of promoting the teaching of basic computer science in schools.

The Raspberry Pi is manufactured in two board configurations through licensed manufacturing deals with Newark Components and Egoman. These companies sell the Raspberry Pi online. Egoman produces a version for distribution solely in China and Taiwan, which can be distinguished from other Pis by their red coloring and lack of FCC/CE marks. The hardware is the same across all manufacturers.

The Raspberry Pi has a Broadcom BCM2835 system on a chip (SoC) which includes an ARM1176JZF-S 700 MHz processor, VideoCore IV GPU and was originally shipped with 256 megabytes of RAM, later upgraded to 512 MB. It does not include a built-in hard disk or solid-state drive, but uses an SD card for booting and persistent storage. The Foundation provides Debian and Arch Linux ARM distributions for download.

On 17 December 2012 the Raspberry Pi Foundation, in collaboration with IndieCity and Velocix, opened the Pi Store, as a "one-stop shop for all your Raspberry Pi (software) needs". Using an application included in [Raspbian](#), users can browse through several categories and download what they want. Software can also be uploaded for moderation and release.

In October 2013 the Foundation announced that the one millionth Pi had been manufactured in the United Kingdom and in November 2013 they announced that the two millionth Pi shipped between October 24 and 31st.

The first meeting of the Raspberry Pi SIG

DATE: TUESDAY, MARCH 4 2014
 TIME: ARRIVE 5:30PM - 6:00PM
 PLACE: NY GRILL RESTAURANT (Far end room)
 20204 FRASER HWY., LANGLEY, BC
 WWW.NYGRILL.CA

Place RPI SIG in your subject line and how many people will be attending with you. ALL ON THE SUBJECT LINE PLEASE.

Raspberry Pi for Amateur Radio VOIP (Echolink)

This is an amateur radio transceiver wired into a Raspberry Pi and loaded with Echolink software (SVXLINK). One can use this with a 12V battery and connect to the echolink network. See video parts 1, 2 and 3 at URL:

http://www.youtube.com/watch?feature=player_embedded&v=rvSiH7XVoZQ

Software in use is SVXLINK at:

<http://sourceforge.net/apps/trac/svxlink/wiki/SvxLink>

Turning the Raspberry Pi into an FM Transmitter

The Imperial College Robotics Society in the UK have developed code to turn the Raspberry Pi into an FM radio transmitter covering 1 to 250 MHz. See the video at URL: http://www.youtube.com/watch?feature=player_embedded&v=ekcdAX53-S8

Read the Imperial College Robotics Society article and download the code from URL:

http://www.icrobotics.co.uk/wiki/index.php/Turning_the_Raspberry_Pi_Into_an_FM_Transmitter

Read the Make: Magazine article at

<http://blog.makezine.com/2012/12/10/raspberry-pi-as-an-fm-transmitter/>

Raspberry Pi - The road to compliance

http://www.southgatearc.org/news/june2012/raspberry_pi_the_road_to_compliance.htm

Mani Vigg, the owner of the NY Grill has graciously offered his dining/meeting room to us free of charge. The idea is for people to arrive between 5:30pm - 6:00pm and order a drink, appetizer, or dinner. I selected this place because Mani's food is excellent and the average dish is only \$8-10. In fact, there are several dinner specials each night. Buy any beverage (pop, beer, wine) and get the special for only \$8.95. It will be an excellent time for

(Continued on page 15)

The Quiet Zone – Where There Is No Cell Service

Within a 13,000 square-mile area in West Virginia and Virginia, cell phone transmissions, Wi-Fi, and even microwave ovens are restricted - by law. This is the National Radio Quiet Zone, established in 1958 to protect the National Radio Astronomy Observatory at Green Bank, West Virginia, from harmful interference. But what's it like to live here?

<http://www.npr.org/player/v2/mediaPlayer.html?action=1&t=1&islist=false&id=218976699&m=230358995>

Almost every radio station disappeared, too, except for [Allegheny Mountain Radio](#), which broadcasts at a low enough frequency to avoid being banned.

"We didn't realize the rest of the world was getting connected and staying connected constantly, via phones and computers and all that," said radio host Caleb Diller, who grew up in Pocahontas County, W.Va. "So we were kinda back in time a little bit. We hadn't progressed to that."

The county still hasn't progressed to constant connectivity. That's because it sits within a zone designed to protect a sophisticated radio telescope at the National Radio Astronomy Observatory from interference. The [Robert C. Byrd Green Bank Telescope](#) is the world's largest fully steerable radio telescope.

Radio telescopes work by tracking and reading the energy waves that come from stars or gases, but they have to be located in sparsely populated areas to avoid electromagnetic interference.

Ironically, the Greenbank telescope has itself gone silent, the victim of government funding cutbacks.



(Continued from page 14)

people to chat, meet and network before the meeting starts. Please don't miss this and support our pal Mani for being so gracious!

We will start the meeting about 6:30pm. This will be a VERY informal group based on the sharing of projects and information related to Raspberry Pi. I see the first agenda as follows:

AGENDA

1. Introductions
2. Discussion of starting a simple group website in WordPress to share details of projects, with pictures and specs.
3. Discussion of how you wish the group to proceed (meetings monthly, quarterly, etc. and agenda items).
4. Round Robin - people bring your projects and discuss them with the group. Plenty of show and tell. Hopefully many of the projects will be related to

Amateur Radio. If not, bring them anyway! Have details with you that you can share later on the website or via email.

5. Information sharing: Bring lists of Raspberry Pi resources (websites, books, etc.) and share this info with the group.
6. Close meeting by 9:00pm (ish)

The group is seeing so much attention from all over Metro Vancouver and beyond, that we need an instant communications tool. This new website will be updated over the next week and will eventually have links to resources, project pictures, details and more. Visit often and soon we will take submissions to add to this site. Volunteer bloggers are needed!

<http://fraservalleyraspberrypi.wordpress.com/2014/02/24/inaugural-meeting-raspberry-pi-sig/>

~ Joe Zaccaria, VE7TOL
JOEZAC@MAC.COM



RAC News

Radio Amateurs of Canada

RAC Bulletin 2014-002E - Industry Canada's Antenna Tower Siting Policy.

2014-02-06

On February 5th, Industry Canada's Minister made an announcement bearing the title "Harper Government Making Changes to Cell Tower Placement Rules".

Industry Canada's current governing document is CPC-2-03. A notice has been posted stating that changes to the document will be made subsequent yesterday's announcement. Rest assured RAC will convey to IC in the strongest of terms that no changes be made that would negatively affect the amateur radio antenna installations currently in place. RAC does not believe this policy change announcement was generated by problems caused by the amateur radio community. RAC further believes the current 15m height has worked well for several years. Amateur radio antenna structures, like those used to receive off the air television or listen to short wave broadcasts are different in many ways from cell phone towers:

- they are usually much smaller and not as visibly intrusive
- they are operated by citizens for their personal use, not by companies
- they are usually located on the property of the user's residence
- they are operated intermittently rather than the continuous operation of commercial antenna systems
- the population of radio amateurs and consequently the number of their antennas is growing slowly at about the growth rate of the general population, unlike the exponential growth in wireless communications creating the pressure for rapidly increasing numbers of cell phone towers there has been no popular expression of concern over amateur radio or personal use antennas, unlike cell phone towers

RAC has been instrumental in a number of communities in establishing public consultation protocols that recognize the differences between commercial cell towers and

personal use or amateur radio antennas and so to permit amateur radio antenna structures in excess of 15m without consultation. RAC has always been willing to work with Industry Canada in consultations that take into account the needs of the general community and amateur radio operators.

Radio amateurs are most noticed by the general community when they fill in for failing communications systems such as has happened with floods and ice storms or provide communications for community events. The Canadian Ski Marathon taking place this weekend relies on amateur radio volunteers for the communications essential to the operations of the event and the safety of its participants. 2014 marks the 41st year radio amateurs provided this support. Similar community activities take place around the year and across the country. To develop the expertise that allows radio amateurs to help their communities in this way radio amateurs need antennas. We must be very careful not to make it needlessly difficult to install antennas as that would over time reduce the number of people able to provide these important community services.

We will provide regular updates on this announcement going forward as the situation warrants.

~ Glenn MacDonell, VE3XRA
RAC Vice-President Regulatory Affairs
ve3xra@rac.ca

RAC Bulletin 2014-004E - RBR-4 Confirms Access to 137 Khz.

2014-03-15

Industry Canada approved access by Canadian radio amateurs to the Low Frequency (LF) band 135.7 -137.8 kHz, subject to certain conditions in late 2009. This was a direct result of implementing changes from the World Radiocommunication Conference (WRC) 2007, which added amateur use of this spectrum on a Secondary basis. This has now been included in the newly updated RBR-4 Standards for the Operation of Stations in the Amateur Radio Service.

[http://www.ic.gc.ca/eic/site/smt-](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10650.html)

[gst.nsf/eng/sf10650.html](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10650.html) Canadian amateurs are reminded that the maximum emission bandwidth in this band is 100Hz (e.g. cw, BPSK31, BPSK63, etc.) as well as a maximum EIRP of 1 watt. These conditions are found in Footnote 5.67A: "Stations in the amateur service using frequencies in the band 135.7-137.8 kHz shall not exceed a maximum radiated power of 1 W (EIRP) and shall not cause harmful interference to stations of the radionavigation service operating in countries listed in No. 5.67. (WRC-07)".

RAC welcomes reports of activities in this band, especially reports of DX achieved and useful operating tips. We are asking those active on this band to consider writing articles for TCA to help other amateurs get started on LF, given the large differences in LF antennas, and the need for homebrew transmitters, receivers, and/or transverters. Insights into propagation and other LF operating tips are also requested.

Thanks to Richard Ferch, VE3KI and Jim Dean, VE3IQ.

George Gosline, VE3YV
RAC International Affairs
16777215 Bluebird
ve3xra@rac.ca

What's new on the "Communications" front at RAC?

Last October, Vincent Charron, VA3GX/VE2HHH, became RAC's new Director of Communications and Fundraising. Vince works at the RAC Headquarters in Ottawa along with the RAC Office Manager, Frank Greene.

The RAC website, our main platform, is currently undergoing a revamp. This process will take some time, however in the end we should have a better, newer, friendlier platform to benefit

all members, Amateur Radio operators as well as the general public. RAC is more and more capitalizing on both of its social platforms, Twitter and Facebook, to provide timely information relevant to Amateur Radio in general as well as RAC/ARES activities. Find us at @RACTWEETS or search for "Radio Amateurs of Canada" on Facebook. Please log in often to these sites to read frequent updates from the RAC head office.

Do you have any Amateur Radio news tidbits, pictures (ham shack, mobile/base antenna...), personal write-ups or bios, DX success stories and so on that you would like to share with RAC? Please send it to us by email or regular mail to the address provided below and we'll help find the best place to give you that opportunity to share it.

RAC Director of Communications and Fundraising 720
Belfast Road, #217, Ottawa ON K1G 0Z5 Telephone: 1-877-273-8304

~ Vincent Charron, VA3GX/VE2HHH

RAC Director of Communications and Fundraising
hq.communications@rac.ca

RAC Bulletin 2014-003E - Deputy Director - Mid-West Region

2014-02-14

The RAC Mid-West Director would like to thank Bill Boskwick, VE4BOZ for accepting the position of Deputy Director for the Mid-West region of Radio Amateurs of Canada (RAC). He subsequently took on a role there as a RAC ARES CEC for the St. Paul/Bonnyville area. Now living in Elm Creek Manitoba and officially retired, Bill was the District Officer for NE Alberta with the Alberta Emergency Management Agency and also has 32 years military service with Canadian Forces as a Communications Electronics Engineering Officer and former deputy commander of the signals regiment in Winnipeg he is a valuable asset to have on our team. Bill was proctored by Assistant Director Bill Till, VE5FN of Lloydminster, SK to get his amateur radio license while he was based in NE Alberta.

Contact information for the Mid-West Region Director, Deputy and assistants are:

Director - Derek Hay, VE4HAY, ve4hay@shaw.ca

Deputy - Bill Boskwick, VE4BOZ, retiredcele@gmail.com

Assistants - Bill Till - VE5FN (Lloydminster, SK)

Doug Pfaff - VE5DCP (Regina, SK)

Richard Holder - VE4QK (Beausejour, MB)

~ Derek Hay

SARC Contest Calendar for 2014

Dates	Contest	Modes
Mar 29-30	CQ WW WPX Contest	SSB
May 24-25	CQ WW WPX Contest	CW
June 28-29	ARRL Field Day	



The "Best" Random Wire Antenna Lengths

Random wire lengths you should and should not use

Jack Clarke, VE3EED - SK

A random wire is exactly that—a piece of wire that's as long as you can possibly make it. One end of the wire attaches to a tree, pole or other support, preferably at a high point. The other end connects to the random-wire connector on a suitable antenna tuner. You apply a little RF and adjust the antenna tuner to achieve the lowest SWR. That's about all there is to it.

Random-wire antennas seem incredibly simple, don't they? The only catch is that your antenna tuner may not be able to find a match on every band. The shorter the wire, the fewer bands you'll be able to use. And did you notice that the random wire connects directly to your antenna tuner? That's right. You're bringing the radiating portion of the antenna right into the room with you. If you're running in the neighborhood of 100W, you could find that your surroundings have become rather hot—RF hot, that is! We're talking about painful "bites" from the metallic portions of your radio, perhaps even a burning sensation when you come in contact with the rig or anything attached to it.

one or two insulators and a little time.

One single wire, no solder connections, very simple... all the way from the tuner to the end support. That's it in a nutshell... or is it?

Many hams have tried till they are blue in the face to install the random wire antenna that works on most; if not all of the HF bands with terrible results.

SWR usually is all over the place and the tuner will just not do it's job. You can get good loading and low SWR on sometimes 2 or 3 bands, but one or more of the bands that you want, just will not cooperate with an SWR that can be adjusted with the "tuner".

So after much frustration, down it comes and you go on to a totally different type of antenna... all that time just wasted in your opinion... until now!

We recently found some good information about random wire lengths that you should and should not use.

Jack, VE3EED, hopefully has solved a major headache we all have when we attempt to go thru the trial and error and frustration with getting the random wire to work where WE want it to work.

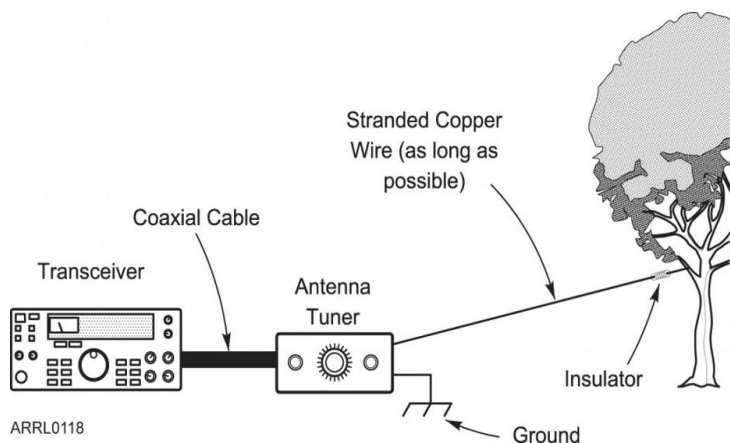
He knew that in order for the tuner to "see" a fairly low SWR to work within it's range, that the antenna had to be **NOT A HALF WAVE ON ANY FREQUENCY** that we wanted to use, because a half wave will give us a very high impedance and the resulting high SWR into a 50 ohm transmitter!

So Jack took most of one day, did the math with the aid of his trusty calculator, several cups of coffee and came up with, in Jack's own words... "Here's the word on random-wire antennae."

Presented for your consideration by Jack, VE3EED, the table (next page) represents half wave lengths and multiples that you **DO NOT WANT TO USE!**

You have to stay away from a half wavelength on any frequency. Therefore, we came up with the following numbers to avoid (IN FEET):

These lengths in the table are the culprits that cause all of the trouble when using random lengths.



The random wire antenna is probably one of the least expensive, easiest and cheapest HF antennas to use if you have a tuner and you want to get the "most" out of a length of "random" wire without having to pull out that calculator, doing the math, getting the center insulator built or bought, running the feedline, and all the rest that goes with putting up a more elaborate antenna. All you need for a random wire antenna is some wire, your tuner, one or more supports up as high as you can get them to string the wire from the supports to the tuner, at least

Frequency MHz	1/2 Wave	2nd Multiple	3rd Multiple	4th Multiple
1.9	246	492	738	984
3.8	123	246	369	492
7.2	65	130	195	260
10.1	46	92	138	184
14.2	33	66	99	132
18.1	26	52	78	104
21.3	22	44	66	88
24.9	19	38	57	

So those are the numbers above that we have to stay as far away from as possible when building a long-wire antenna. Here they are in order: 16 19 22 26 32 33 38 44 46 48 52 64 65 66 76 78 80 88 92 95 96 99 104 110 112 114 123 128 130 132 133 138 144 152 154 156 160 165 171 176 182 184 190 192 195 198 208 209 220 224 228 230 231 234 240 242 246 247 256 260 264 266 272 276 285 286 288 297 304 308 312 320 322 323 325 330 336 338 342 352 361 363 364 366 368 369 374 380 384 390 396 399 400 414 416 418 429 432 437 440 442 448 455 456 460 462 464 468 475 480 484 494 495 496.

Some of these numbers are too close to squeeze in between them. Here are the final numbers (in my opinion) in green below that would be good for a long-wire antenna: (You may want to make a note of them)

29 35.5 41 58 71 84 107 119 148 203 347 407 423

REVISION NOTE: James, KB5YN, points out that one of the so-called GOOD numbers was 220 feet. That is the 10th multiple of a half wave on 15 meters. His radio didn't tune up very well on 15 meters. So, having nothing better to do one day, I re-did the calculations going out to 500 feet. That meant calculating all the way to 32 multiples of a half wave on 10 meters. I won't bore you with all that so the first portion of this still only shows up to the 4th multiple. There are so many new frequencies to stay away from, that it gets pretty tricky for the longer wires. However, the list has been revised and is good for wires as long as 500 feet.

~ Jack VE3EED

Mike AB3AP wrote a small C program that does just what Jack did, but used the band edges. Because he's more visually oriented, he then plotted the many overlapping "red zones" and ended up with the page at:

<http://udel.edu/~mm/ham/randomWire/>

He plotted the results for the U.S. CW band edges for use with his 4 band Elecraft K1 QRP rig.

You will note that when comparing Mike's results with VE3EED that some of the results are a bit different.

Don't know how well known this is to the Club membership. It's a year-long operating event anchored by W1AW handing out QSOs from every state and some territories. Every week it's two different states. Last week it was North Carolina and West Virginia. This week it's South Carolina and Utah. They typically have several bands activated at the same time and they're generating massive pileups. If you miss some states they do it all again in the 2nd half of the year.

They're easy to find, just check out the spotting network. Some members may need to be told how to do this.

Any members working towards WAS would be particularly interested in this. It's not often that, say, North Dakota is on several bands and modes at the same time for an entire week!

Op trainees would also get great practice in competing in pile-ups.

Haven't tried it yet, but would also provide an excellent test of CW Skimmer's usefulness in unwrapping pile-ups.

This isn't just about working W1AW. There is another component involving hams working each other. Some QSOs are worth more points than others. QSOs with me are worth 100 points!

Details at <http://www.arrl.org/centennial-qso-party>

73, Jim VE7FO



QRT...

Bill Gipps VE7XS

A Different Perspective 2014

As I'm sure many of you have, I've followed the news over the last few months, and we have seen major storm after storm roar across North America. Most of the snow and freezing rain fell in States and Provinces that were used to real winters. Even for those locations, it was severe. At times, there were millions of people without electricity - some for over a week. Driving conditions were extreme, and there were many mass crashes and extended road closures. There have also been a lot of fatalities - not just in motor vehicles, but from carbon monoxide poisoning from generators, fires from unsafe candles, and just plain old heart attacks from shoveling snow.

A more recent storm, hitting the State of Georgia, made me do some additional thinking. Georgia has year round weather similar to the Lower Mainland. Ok - they get warmer summers with a lot more humidity, but real winter weather for a good chunk of Georgia, usually doesn't happen - just like here. Summer or all-season tires are the norm there, and we have all seen what has happened when they were hammered with winter storms - several feet of snow and freezing rain. The latest statistics I have seen indicate that in the State of Georgia, there have been over twenty snow days - the weather was so bad, school was out. I can't remember the last snow day we had in Langley or Surrey as a comparison?

Imagine that wild weather here in the Lower Mainland - the carnage on the streets, the impact to the economy, and the number of people who would be unprepared and needing assistance. Those types of storms, happening again and again, over a couple of months would be devastating to the region. The Lower Mainland, like Georgia, is not prepared for a significant and sustained series of bad weather systems. It doesn't need to be an earthquake, a hurricane, a tornado or terrorist attack to substantially disrupt our lives and put large groups of our population at risk. It could just be bad weather - not usual, not expected, but it could happen.

So what is my point? It is about being prepared; taking a bit of time, over time, and making sure that you can take care of yourself, your family, and likely your neighbours as well. What would it take to put together a 'get-home' bag for each of your vehicles? Some food, some water, a couple of candles, etc. In Atlanta, a large number of people spent 12-20 hours trapped on the freeways in their

vehicles. For many, there was no help - they had to help themselves, and what they had to depend on was what was in their vehicles.

Now - your family and your own house? What about food preparations? How many days could you comfortably feed your family? Do you have alternative options for heat and cooking? What about water, medicines and other creature comforts? What about your family and friends?

If you lost power for a week - and the temperature plummeted - do you have what you need to take care of yourself and your family? Do you have a plan and an alternate source of heat and light? Could you contact your kids, your parents, or your friends? What if you couldn't get home - do they know what to do? Could they look after themselves for an extended period of time?

Our hobby gives us the ability to communicate when most forms of communications available to the general public are unavailable or overwhelmed. I'm encouraging you to think about the next step - not only to be able to communicate, but to be able to look after your family, friends and neighbours for an extended period of time. Use your communication skills to encourage those you know to expand their preparations so they can take care of themselves, should there be a cataclysmic event? Remember - it doesn't have to be a major earthquake; just plain old bad weather could significantly impact us, here in the Lower Mainland. Be prepared.

~ Bill



HAMNation

TWIT (This Week in Technology) presents
a weekly HD video webcast about Ham Radio.

Hosted by Leo Laporte W6TWT, Bob Heil K9EID, and Gordon West WB6NOA
with George Thomas W5JDX covering 'Smoke and Solder'.

Recorded live each Wednesday night 8 PM CDT at live.twit.tv
All programs archived at twit.tv/hn

Join us each Wednesday and don't miss seeing the first episode with special
guest Joe Walsh WB6ACU, who wrote and plays the theme music for
HAMNation.

Help us spread the word about HAMNation.

*We hope to connect with
Bob Heil via Skype video-
call for our April 2014
General Meeting*